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REMARKS

Claims 1-36 are currently pending in the subject application and are presently under consideration. Claims 35 and 36 have been amended herein. A marked-up version of claim amendments made herein is found on pages 2-10 of this Reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1-36 Under 35 U.S.C. §103(a)

Claims 1-36 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hashimoto (US 6,018,688) in view of Kahn, *et al.* (US 5,567,927). Withdrawal of this rejection is respectfully requested for at least the following reasons. Neither Hashimoto nor Kahn, *et al.* teach or suggest every aspect set forth in the subject claims.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. See *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The present invention relates generally to inventory control and wafer routing during manufacture, and in particular to systems and methods for facilitating inventory control and routing of wafer products and circuits marked with a barcode. Independent claim 1 recites, "A system for performing inventory control, comprising: one or more inventories adapted to store at least one of wafers, unpackaged circuits and packaged circuits, where the wafers are suitable for processing into integrated circuits, and where at least one of the wafers, the unpackaged circuits and the packaged circuits are marked

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with one or more barcodes; one or more barcode readers operable to read one or more barcodes on at least one of the wafers, the unpackaged circuits and the packaged circuits; and *one or more sorters adapted to route at least one of wafers, unpackaged circuits and packaged circuits to one or more inventories based, at least in part, on information encoded by the one or more barcodes.*" Independent claims 14, 16, 27, 28, and 32, and amended independent claims 35 and 36, set forth similar aspects. According to the subject application, "The wafer 100 is marked with a barcode 110." (Page 7, lines 19-20.) "The barcode 210 facilitates locating a wafer 200 to process and *determining to which device the wafer 200 should be routed* by facilitating locating stored information about the wafer 200." (Page 8, lines 24-26.) Thus, the present invention utilizes a *barcode on a wafer* to access and update processing information associated with the wafer and then *selectively routes the wafer according to the manufacturing requirements of the wafer*. Hashimoto does not disclose such elements of applicants' invention as recited in the subject independent claims.

Hashimoto merely discusses determining *whether or not to load* a wafer onto a working device *once the wafer reaches the working device*. (See, e.g., Column 3, lines 39-43: "When the wafer 10 on the carrier 11, *reaches a working device*... the input/output terminal [at the working device]...*reads optically the barcode 12 from the carrier 11.*") Thus, Hashimoto clearly states that a *barcode on the carrier is read only upon arrival at of the carrier at a specific working device*. Such aspects of Hashimoto inherently require that the wafer/carrier combination of Hashimoto must visit each working device before a the system can make a determination of whether or not a wafer should be loaded onto the working device, further increasing production cost and total manufacture time. Conversely, the subject claims set forth a *sorter that proactively routes wafers* depending on their respective processing requirements, as determined from information associated with a *barcode located on the wafer itself*. See, e.g., page 3, lines 12-15, describing the "sorter adapted to route" recited in the subject independent claims: "...barcodes on one or more wafers in a first inventory may be read, and data concerning those barcodes passed to a sorter, which can route the wafers to one or more manufacturing devices *so that the wafers end up in appropriate manufacturing devices.*"

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Thus, the present system can bypass a working device, without having to stop at the working device, if the information associated with the barcode on the wafer indicates that the wafer does not require the particular action provided by the working device.

Kahn *et al.* fails to overcome the deficiencies of Hashimoto with respect to independent claims 1, 14, 16, 27, 28, 32, 35, and 36. Specifically, Kahn *et al.* does not teach or suggest "*one or more sorters adapted to route at least one of wafers, unpackaged circuits and packaged circuits to one or more inventories based, at least in part, on information encoded by the one or more barcodes.*" Rather, Kahn *et al.* merely discusses loading a plurality of wafers into a storage rack and scanning barcodes on the wafers to determine identities associated with the wafers in the rack.

In view of at least the above, it is readily apparent that neither Hashimoto nor Kahn *et al.*, alone or in combination, make obvious the present invention as recited in independent claims 1, 14, 16, 27, 28, 32, 35, and 36 (and claims 2-13, 15, 17-26, 29-31, 33, and 34, which depend respectively there from). Accordingly, this rejection should be withdrawn.

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CONCLUSION


The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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